DATA ITEM DESCRIPTION

FORM APPROVED
OMB NO. 0704 0188

1. TITLE	2. IDENTIFICATION NUMBER
Engineering Change Proposal (ECP)	DI-CMAN-80639B(T)

3. DESCRIPTION/ PURPOSE

3.1 An Engineering Change Proposal (ECP) includes both engineering change and the documentation by which the change is described and suggested.

3.2 An ECP describes changes to configuration items and associated configuration documentation that are affected by the proposed engineering change.

4. APPROVAL DATE (YYMMDD)	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6a. DTIC APPLICABLE	6b. GIDEP APPLICABLE
950113	OSD-DO		

7. APPLICATION/INTERRELATIONSHIP

7.1 This Data Item Description (DID) contains the format, content and preparation instructions for the data product resulting from the work task described in paragraphs 5.4.2.3.5 and 5.4.2.4.1, or 5.4.8.2.1 of MIL-STD-973. This DID is used in conjunction with a Notice of Revision (NOR), DI-CMAN-80642B and/or a Specification Change Notice (SCN), DI-CMAN-80643B. A requirement for NORs and SCNs, as applicable, should be contractually imposed in conjunction with this DID.

7.2 This DID supersedes DI-CMAN-80639A.

8. APPROVAL LIMITATION	9a. APPLICABLE FORMS	9b. AMSC NUMBER
	NA	D7093

10. PREPARATION INSTRUCTIONS

10.1 Reference document. The applicable issue of any documents cited herein, including their approval dates and dates of any applicable amendments, notices, and revisions, shall be as specified in the contract.

10.2 ~~Format and content. The Engineering Change Proposal shall be prepared in contractor format. The ECP content shall be in accordance with Appendix D of MIL-STD-973~~.

11. DISTRIBUTION STATEMENT

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

DATA ITEM DESCRIPTION

Form Approved
OMB No. 0704-0188

1. TITLE	2. IDENTIFICATION NUMBER
PRODUCT DRAWINGS AND ASSOCIATED LISTS	DI-DRPR-81000A (T)

3. DESCRIPTION/PURPOSE

3.1 Product Drawings and Associated Lists provide engineering data to support competitive procurement and maintenance for items interchangeable with the original items. These drawings represent the highest level of design disclosure.

4. APPROVAL DATE	5. OFFICE OF PRIMARY RESPONSIBILITY(OPR)	6a. DTIC REQUIRED	6b. GIDEP REQUIRED
970521	AR		

7. APPLICATION/INTERRELATIONSHIP

7.1 This Data Item Description (DID) contains the format and content preparation instructions for Product Drawings and Associated Lists resulting from the work task described in 3.6.3 of MIL-DTL-31000A.

7.2 This DID is applicable to acquisitions of military systems, equipment, and components. It is intended for acquiring drawings and associated lists at the end of the Engineering and Manufacturing Development Phase and during subsequent phases of the DoD materiel life-cycle.

(Continued on page 2)

8. APPROVAL LIMITATION	9a. APPLICABLE FORMS	9b. AMSC NUMBER
		D7274

10. PREPARATION INSTRUCTIONS

10.1 Reference Documents. The applicable issue of documents cited herein, including their approval dates and the dates of applicable amendments, notices, and revisions, shall be as cited in the contract.

10.2 General. Product drawings and associated lists shall meet the requirements of MIL-DTL-31000A. Product Drawings and Associated Lists shall provide the design disclosure information necessary to enable a manufacturer of similar products at the same or similar state of the art to produce and maintain quality control of items(s) so that the resulting physical and functional characteristics duplicate those of the specified item. These drawings shall:

a. Reflect the end-product at its current level of design maturity.

b. Provide the engineering data for Logistics Support products.

c. Provide the necessary data to permit competitive acquisition of items identical to the original item(s).

(Continued on page 2)

11. DISTRIBUTION STATEMENT

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Block 7, Application/Interrelationship (continued)

7.3 It is not intended that all the requirements contained herein should be applied to every program. This DID should be tailored to the minimum data requirements of the applicable contract or purchase order.

7.4 This DID supersedes DI-DRPR-81000, which superseded DI-E-7031 and DI-CMAN-80779.

7.5 This DID is related to DI-DRPR-81001A, DI-DRPR-81002A, and DI-DRPR-81003A.

7.6 A purchased item, as defined by ASME Y14.24M, an item which is sold or traded in the course of conducting normal business operations, is used by commercial industry, or is a specialized version of a supplier's general product line which he routinely customizes. Purchased items as used herein have also been referred to as vendor items or vendor-developed items.

Block 10, Preparation Instructions (Continued)

10.3 Format. Product Drawings and Associated Lists shall be in either the contractor's format or Government's format as specified on the Selection Work Sheet incorporated into the contract or purchase order.

10.4 Content. Product Drawings and Associated Lists shall conform to the requirements of ASME Y14.100M, ASME Y14.34M and, where DoD peculiar requirements must be met, MIL-STD-100. They shall document directly or by reference the following, as applicable:

a. ~~Details of unique processes, i.e. not published or generally available to industry, when essential to design and manufacture.~~

b. Performance ratings.

c. Dimensional and tolerance data.

d. Critical ~~manufacturing processes~~ and assembly sequences.

e. Toleranced input and output characteristics.

f. Diagrams.

g. Mechanical and electrical connections.

h. Physical characteristics, including form, finishes, and protective coatings.

i. Details of material identification, including material condition, and mandatory treatments and coatings.

j. Inspection, test and evaluation criteria.

k. Equipment calibration requirements.

l. Quality assurance requirements.

m. Hardware marking requirements.

Block 10, Preparation Instructions (Continued)

n. Requirements for reliability, maintainability, environmental conditioning, shock and vibration testing and other operational or functional tests.

o. ~~Vendor substantiation data when required by the contract or purchase order~~.

p. Requirements for programming software into devices or assemblies including a description of the input media and the procedures for validating that the software has been installed correctly.

q. Special consideration items and processes.

10.5 Item definition. All parameters required to define each unit, assembly, subassembly, part or material shall be presented on the applicable drawing. This includes data such as:

a. All necessary mechanical dimensions to fully define fabrication, acceptance, interface or installation of the item depicted.

b. All necessary electrical parameters to fully define fabrication, acceptance, interface or installation of the item depicted.

c. All other necessary physical parameters to fully define fabrication, acceptance, interface or installation of the item depicted, i.e., weight, pressure, viscosity, etc.

d. All necessary environmental conditions which units, assemblies, subassemblies, parts and materials must meet to perform effectively in the end item, such that the end item will meet its specification requirements.

10.6 CAGE code and document numbers. Product Drawings and Associated Lists shall be identified with the contractor's CAGE code and contractor document numbers or with a Government CAGE code and document numbers as specified in the Selection Work Sheet incorporated in the contract or purchase order.

10.7 Selection of drawings. The types of drawings required will vary according to the complexity of the contract end item. The Selection Work Sheet incorporated in the contract or purchase order will specify whether the contractor or the Government is responsible for selecting the types of drawings and lists.

10.7.1 Vendor item control drawings. Vendor item control drawings shall be used to specify the requirements for purchased items (see 7.6) when such items have been approved for use in the design and are used without alteration, selection or source qualification (testing of an item prior to procurement action to ensure that it satisfies the specified requirements).

10.7.2 Source control drawings. Source control drawings shall be used to specify the requirements for purchased items (see 7.6) only when such items have been approved for use in the design and:

a. the item is for a critical application and

b. the requirements can be met by an item from one or more sources and

c. the application required source qualification (testing of an item prior to procurement action to ensure that it satisfies the specified requirements).

10.7.3 ~~Standard Microcircuit Drawings. Standard Microcircuit Drawings (MIL-HDBK-780) shall be used to specify the requirements of microcircuits.~~

DATA ITEM DESCRIPTION

Form Approved
OMB No. 0704-0188

1 TITLE	2. IDENTIFICATION NUMBER
Training Materials	DI-ILSS-80872 (T)

3 DESCRIPTION / PURPOSE

3.1 Provides the minimum materials required to support a military services training program on the end item equipment.

4 APPROVAL DATE (YYMMDD)	5 OFFICE OF PRIMARY RESPONSIBILITY (OPR)	6a DTIC APPLICABLE	6b. GIDEP APPLICABLE
890629	S/DPSC-RST		

7 APPLICATION / INTERRELATIONSHIP

7.1 This DID contains the format and content preparation instructions for the data product generated by the specific and discrete task requirement as delineated in the contract.

8 APPROVAL LIMITATION	9a APPLICABLE FORMS	9b AMSC NUMBER
		S4775

10 PREPARATION INSTRUCTIONS

10.1 General. ~~The training materials shall be suitable for application in a self-paced, self directed format~~. The materials shall contain sufficient written or audio-visual instructions to guide students through all specified didactic and hands-on training with~~out a need for~~ instruction lectures and ~~with a minimum requirement for i~~nstructor interface with students. Existing manufacturer's training and service manuals can be used in so far as they meet specified requirements. The role of the instructor will be to observe and evaluate student progress, to answer questions, provide supplemental training when necessary, ~~and to insert training malfunctions into the equipment~~. The training materials should be for students with prerequisite knowledge of electronics theory, use of general electronic test equipment, and a basic knowledge of hand tools.

10.1.1 Format. ~~The materials provided shall be in the contractor's own format~~. However, each text shall include a table of contents. This shall include a listing of all major subjects and the page number on which they appear.

10.2 Contents. The training materials shall consist of a programmed text, instructor guidance and supplemental written and audio-visual material used to support a training program. All instruction, information, and schematics shall be in the English language and use standard symbology.

Continued on Page 2

11 DISTRIBUTION STATEMENT

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

☆ U.S. GOVERNMENT PRINTING OFFICE 19[illegible]-[illegible]/40061242

Block 10, Preparation Instructions (Continued)

10.2.1 Programmed Text. The programmed text shall be designed to guide the student through the clinical application, operation, inspection, adjustment, troubleshooting, and repair of the equipment. The programmed text shall be divided into the sections listed below. ~~Each section, except as noted, shall include at the end a written or practical exercise to evaluate student understanding of information provided in that section.~~ Each section may refer the student to other supplemental written or audio-visual material (transparencies, 35mm slides, charts, or VHS format video cassettes), which shall be included in the package. The following lists the requirements for each section. Additional sections and material can be added.

10.2.1.1 Required Material. This section shall list all equipment and material required by the student to complete the programmed text, including test equipment, audio-visual material, tools, supplies, and simulators. No student exercise is required.

10.2.1.2 ~~Clinical Application. This section shall give a detailed explanation of the equipment's diagnostic or therapeutic use in the medical environment. The purpose of this section is to give the student sufficient background information on medical applications and terminology associated with the equipment to communicate with medical personnel using it. This section may be combined with the following section~~.

10.2.1.3 Operating Procedures. This section shall guide the student step-by-step through the hands-on operation of the equipment from start-up to shut-down. The instructions will be sufficiently detailed to allow the student to operate and evaluate performance of all operator accessible controls and functions. ~~It shall also include sufficient information for interfacing the equipment with the patient or simulators for routine use, as applicable~~. Before the student is instructed to operate the equipment, all safety precautions to prevent injury or equipment damage shall be clearly explained. The purpose of this section is to give the student sufficient information to operate the unit and conduct in-service user training classes.

10.2.1.4 Routine Inspection. This section shall guide the student step-by-step through routine inspection of the unit to assure proper and safe operation. Inspection shall be listed in a checklist format, followed with detailed information if needed. This section should include:

(1) Daily user maintenance or performance checks.

(2) Monthly or annual preventive maintenance inspection to include inspection of components subject to wear, routine servicing requirements such as lubrication or filter changes, safety inspection, tolerance, and frequency of inspection.

Block 10, Preparation Instructions (Continued)

10.2.1.5 Calibration. This section shall list all adjustments and calibrations required to assure accurate and safe operation of the equipment, including frequency and tolerances. This shall include user daily calibration, periodic calibration, and calibration/adjustments required to bring the unit back into specifications. All test equipment and simulators required to perform these calibrations or adjustments shall be listed.

10.2.1.6 Troubleshooting. This section will explain in detail how all functions of the system operate, including detailed circuit theory. In the course of explaining theory of operation, significant waveforms and voltages will be shown in the text as well as proper equipment hookup to measure these. A troubleshooting guideline shall be given to help the student locate common problems. Warnings shall clearly be listed when improper test equipment hookup might cause personal injury or damage to equipment.

10.2.1.7 Repair. This section shall show the student how to repair high failure parts (including malfunctions inserted by instructor) remove equipment covers/access panels, disassemble major systems, and reassemble. Warnings shall clearly be stated if injury or equipment damage can be caused by improper disassembly (e.g.: counter balances). Specialized tools required shall be listed.

10.2.2 Instructor Guidance. Guidance for instructors to use in applying the programmed text shall be provided under separate cover. The guidance shall include:

(1) Answers to all student exercise.

(2) Descriptions of points in the programmed text where instructor involvement, observation, or action is necessary or recommended to insure safety or verify student performance.

(3) Instructional Malfunctions consisting of a listing of various equipment malfunctions to be introduced by the instructor and diagnosed and repaired by the student. A minimum of five malfunctions is required for each separately identifiable system or circuit. The malfunctions should approximate as nearly as possible, problems likely to occur, and may consist of a combination of system maladjustments and bad components. A listing of malfunctions will be given which shall include:

a. ~~Action required by instructor to install malfunction; exact component to replace or maladjustment to make~~.

b. ~~Description of symptom caused by malfunction~~.

c. Test equipment and tools required to detect the malfunction.

d. Suggested allowable time for student to diagnose malfunction.

e. ~~Availability and cost of bad components to be used as malfunctions~~.